

ABSTRACT

A system transports a key between a first node (505) at one end of a path (500) through a quantum cryptographic key distribution (QKD) network to a second node (525) at an opposite end of the path (500), where the QKD network includes multiple nodes. The system transmits secret bits between the multiple nodes of the QKD network using quantum cryptographic mechanisms. The system reserves (530), from the first node (505), portions of the transmitted secret bits at each intermediate node along the path between the first (505) and the second node (525). The system transports a key between the second node (525) and the first node (505) using the reserved portions (555, 560, 565, 575) of the transmitted secret bits.